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Smart Board İn Mathematics Education, The Use Of Cartoon Characters İmpact On Student Success

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Abstract

This aim practiced to appear the effect of mathematics on the students by using cartoon character on the interactive board which is supported by computer. The research is the study of experimental and used the pre-test and post-test. Bring into being group of study at Gönyeli Primary school elected from diffirent two classes whose total of 47 student. In the group of expeimental given the mathematics lessons by helping cartoon characters on the interactive board and the other group as a called control group is practiced by using the method of traditional. Beforehand preparing the succesful test is used by the researches as means data collection. During the analysis of data obtained from groups, the obtained of the inbound examples' points that Paired Sample is used for seeing a significiant diffirence that contains whether or not from one another. The direction of the obtained data is found that succesful students in the experimental group which is the higher than students in the control group.

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Keywords: the smart board, cartoon character, the education of mathematics.

INTRODUCTION

Due to the constantly evolving technology changes that have occurred in our lives (Keser, Özdamli, Bicen & Demirok, 2011). These technological advances in the world, the development of education has become a priority (Tas, 2004). The introduction of computers and technology in academic life at today's teaching have emerged at the necessity of using new techniques and methods (Alakoç, 2003; Keser, Uzunboylu & Özdamlı, 2011; Hürsen & Ceker, 2011; Ozdamli, Cavus & Uzunboylu, 2007). Educational technology in several ways to the lives of students

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and educators as well as contribute (Turan, 2010). Because the technology has become a part of social development, new learning technologies should form by updating the old learning (Martin, Diaz, Sancristobal, Gil, Castro & Peire, 2011). Don't forget nowadays; the usage of technology is not a privilege but an obligation. Technological developments influence structures and functions of educational institutions. It is also expected from the teachers that they integrate technology in their lessons inorder to educate the individuals of information society (Demirok & Caglar, 2012; Tuncay & Uzunboylu, 2010).

One of the education programs attracted the attention of educators in recent years, interactive board as called the smart board is device that allows you to interact with user (Demirli & Türel, 2010). To use these boards managed by touching on the screen of computer like a projection which is obvious that more tasks are used effectively (Minor, Bracken, Geisel & Unger, 2006). In these days, we are in continious technological development, the use of interactive board lessons in the schools for combine education is one of the most important steps. Practical courses in visual and audio effects are proccessed that thanks to this technological development which the subjects are more permanent (Cogill, 2002). Sound elements, animations and diffirent emphasis items provide courses to become more visial. In addition, the result of making mistakes which feedback or unclear situation in recycling is the most important features of the smart board. The smart board has established a reletionship between teachers and students who are likened to being a mediator (Lewin, Somekh & Steadman, 2008).

Besides being a science of mathematics, including problems in daily life are important devices that can be used. As stated in the word "problem" includes numerical problems as well as other problems that may confront in life as general. So that teaching of mathematics' behaviours aimed to gain which should include all of the educational levels (Baykul, 2001). Developing of high-level skills in mathematics is a useful activity but most of the students think that the lessons are both hard and unpleasent as progressive of the subjects (Baki, 1997). With the implementation of the computer in teaching of mathematics, the education of mathematics thought to become lovable and fun. Thanks to this technology, students can be recognize new elements of mathematics and also they fell closer to interaction with computers themselves (Chirtman, Badget & Kucking 1997; Gürbüz, 2006). That is to say other words, In today' technologies of technological devices used by teachers that should be use in order to become easily to students attitudes towards mathematics and learning (Heddens & Speer, 1997). Educational technologies for the students develop a positive attitude towards mathematics, increase interest and provide benefits such as reducing a fear (Peker, 1985). Furthermore this softwares as well as the students' understanding this topic has been develop to support critical thinking and practical thinking skill (Ozusaglam, 2007). The development of this teaching tool provides innovative teaching on the contents addressed, through the use of computer resources and active methods, to promote the teaching-learning process and individualized learning (Fonseca, Medeiros, Castro, Góes, Zamberlan & Scochi, 2013).

Because the television appeals simultaneously both the eye and the ear, inluding imagines of cartoon characters was concluded to attract the students' attention (Dogan, 2003). A study conducted in % 63 of children has come up to watch cartoons on the television. In the same study, Tom and Jerry is the most popular cartoon, Jerry as the most popular cartoon or animated character was concluded with rate of %30.4 (Ascı, 2006). In this research, mathematics lessons by using the smart board focusses on the impact of the students' achievement in the education of mathematics by doing cartoon character which is Jerry.

In this research, a computer-assisted insturuction of meterial in mathematics class by using the smart board focuses on the effects of the use the character.

THE AİM OF THİS STUDY

1.Is there a significiant diffirence between pretest – posttest score which a teaching of interactive board for students in the class and a teaching lessons as a traditional for another students in the class?

2.Is there a significiant diffirence between posttest and the academic achievement score which a teaching of interactive board for students in the class and a teaching lessons as a traditional for another students in the class?

PREMISES

The students answered seriously the success of test and the test measured by the acquisition of the measurement device that is assumed the desired behaviour correctly.

LIMITEDNESS

This research in the academic year 2012-2013 when Gönyeli Primary School whose classes 4B and 4D consists of member of students from this school.

2.METHOD

This research in academic year 2012-2013, Gönyeli Primary School in the class of 4B whose total of 43

students as being member of experimental group and the same school but diffirent class whose name 4D which is total of 24 students as being member of control group that both of them consist of that as an example. In addition to that in this study, the experimental design was used by the experimental group and the control one. In thıs study, the experimental group has been using the cartoon charcter on the interactive board in education of mathematics, but the control group has been teaching the method of the traditional in education of mathemetics that both of them compared with the effects of the students each other.

2.1 PREPARATION OF PLATFORM

For the preparation of the media, Flash CS5 and voice recorder was used. Media screenshots are provided further below.

Figure 1 : Lecturing the teaching of metarial **Figure 2 :** Home page of the game

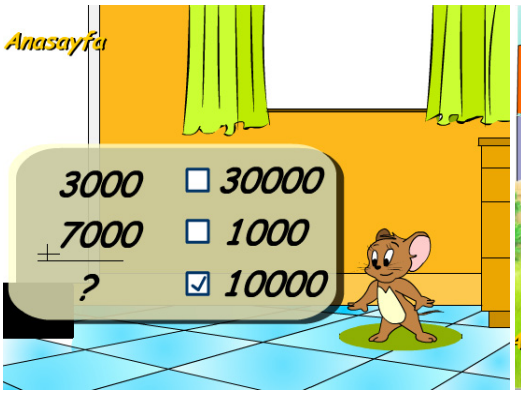

Figure 3 : Solution of the question **Figure 4:** Solution of the question

2.2 THE WORKİNG GROUP

Before the implementation starts, in order to establish the experimental group and the control group which is closed to each other for the selection of two classes that are performed studies. To be close the levels of 4B and 4D were compared each of classes's midterm points. And the level of prior knowledge of groups with similar characteristic to each other in order to see whether or not whose name is t-test that is shown the results in Table 1.

Table 1 . Results of the pre test results

N	$\overline{X}$	SS	t	p

The experimental	24	46,16	20,08		
				-1,369	,184
The control	24	53,87	35,45		

According to table, no meaningful diffirence was found between the classes before starting the study. On the other hand, the levels of success in the two groups whose study has been begin and appears to be similiar to one another.

2.3. COLLECTION OF DATA

After made for the review of literature on the subject of research, each of groups are established the averages of aritmetical whose successful og grades and this group were found to be equivalent to mathematics lesson's points on the cognitive input. In order to obtain experimental data on study, which Northern Cyprus Ministry of Education and The Ministry of Culture in a pretest consists of 30 open-ended questions was applied that including grade of 4 mathematics cirrulum of content and the data obtained from were evaluted by experts who was prepared up to the key of anwers. And then the students in the experimental group by using Mimia interactive board which in mathematics lesson with the help of cartoon characters presented that, the control group lectures the traditional the traditional teaching of method. After these apllications, post test was applied to students covering of the same questions and the obtained data were evaluated with the helping of the key of pre-prepared answer.

IMPLEMENTION OF THE EXPERIMENTAL

Pretesting practice was made with the aim of surveying briefing level about maths lesson which students have before starting education. Obtained data were reviewed in regard to answer key which prepared by experts. After that, precondioned context has been practiced in test group by using a-three-hours-smart board for a month.

In the course which is used interactive board.

- ✓ Informations about context of subjects were given to students by researches.
- ✓ Different activities about prepared context were practiced to consolidate exactly the subject for students.

Figure 5. To understand exactly the subject, attendance of students was provided to interactive board.

DATA ANALYSİS

In 2012-2013 academic year, to observe experiment and control groups which were determined in regard to quiz points whether have equal success of maths or not, free t test was practiced to quiz marks. Similarly, the students which are in sample group. To find whether meaningful differences between preliminary test and proof positive points of the students which were in a sample group was benefited from free T-test. Applied preliminary test and proof positive was composed 30 open-ended questions and was evaluated

With the help of answer key which was prepared by expert to survey maths success at the level of fourth grade students. The evaluation was done score out of one hundred. 55 points for the first question, 5 points for the other questions were given. After doing scoring, data were evaluated in programme of Spss 16.

3. RESULTS

Findings which were obtained points of the preliminary test and proof positive belong to experiment and control group as follows.

Table 2 . This is the average success of the conventional group when results of the t-test which were related with preliminary test and proof positive points of the experiment and control groups were examined.

		N	$\overline{X}$	SS	t	p
Preliminary test	Experiment	23	44,30	14,61144	3.745	0.973
	Control	24	44,83	19,34058		
Proof positive	Experiment	23	65,65	18,23735	-,034	0.001
	Control	24	46,08	13,18733		

When the Table 2 was examined. the average success of conventional group regard to results of preliminary test ($\overline{X}$: 44,83), the average success of group which used bucky at interactive board was found. Statistically, whether the results were different from each other or not was examined by testing the t-test and the difference among the groups. Was found irrelevant statistically (t:3.745, p>.05). In this respect, it was infered that there was not a difference among the beginning levels. Of the students in the group. According to the results of the last test, the average success of control group ($\overline{X}$:65,65) was found. T-test was used by means of understanding statistically differences of these results and the results were found relevant (t: 0.34, p<.05) . This has showed that education which was done with buckies interact with smart board is more successful than traditional education.

Results of the t-test by means of determining success of maths education which was teached with traditional education methods were showed at the Table 3.

Table 3 . Results of the t-test related yo preliminary test and proof positive points of the experiment group.

	N	$\overline{X}$	SS	t	p
Preliminary test	24	44,83	19,34058	-,388	,702
Proof positive	24	46,08	13,18733		

The average success of preliminary test of traditional group students were lower than the average success of proof positive at the Table 3.Point difference between preliminary test and proof positive was found irrelevant (t: 388, p>.05). According to this result, teaching activities which were allowed to practice in traditional group were not successful for increasing success of the student.

Result of the t-test by means of determining success of maths education uf the buckies interact with smart board were showed at Table 4.

Table 4. Results of the t-test related to preliminary test and proof positive of experiment group.

	N	$\overline{X}$	SS	T	p
Preliminary test	23	44,30	14,61144	-9,870	,000
Proof positive	23	65,65	18,23735		

In table 4, the average of the preliminary test points of the experiment students group ($\overline{X}$ **:**46,08) is lower than the average of the proof positive ($\overline{X}$ **:**65,65). Point difference between preliminary test and proof positive was found relivant(t: 9.870, p<.05). According to this result, maths education which was used buckies with smart board affected improving success of the students.

4. COMMENT AND ARGUMENTATION

According to assessment, success levels of the both group were presented as homogeneous. After that, maths eduvation was trained with buckies at interactive board to experiment group and maths education was trained with traditional education methods to control group. Meaningful difference which was seen in the last test for groups were emerged in favour of experiment group. After the education, when the last test points of the students was looked, there was a rise of the preliminary test in experiment group; but this rise can not be said for control. In brief, the groups which have the middle level and the same maths level, maths education used with interactive board is more effective than maths education used with traditional methods. In conferences which were done with experiment group, they express that students' attitudes for maths were more positive and their motivations increased with interactive board.

5.DİSCUSSİON AND RECOMMENDATIONS

Obtained findings were evoluated in line with the problem. There was a difference in favour of the experiment group and in the experiment. Group used buckies at interactive board among the success of maths group which was trained with traditional method. according to this result, maths education which was done with buckies at the interactive board has been increased maths level of the student.

- ✓ To encrease maths level of the students, in the light of the findings, these recommendations can be presented.
- ✓ Except for traditional education method, remarkable stage for students should be emerged.
- ✓ Selected buckies should be lovable characters and characters without violent.
- ✓ Audial and visual effects should be used sufficiantly in the content of the education.
- ✓ When results of the research were examined, education was used with buckies interact with smart board increaded success of the student.
- ✓ In this respect, course software suitable fo findings should be improved and trained with smart boards to the students.
- ✓ In-service seminars for new technologies should be organized for maths teachers and the teachers should be directed by using smart board.
- ✓ Lecturers should be made the students in the faculties of education do works on the preperation about scenarios of course the software on their own branches.

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